

CLAIMS

1. Shifting mechanism on a multiple change-over gear, with an axially displaceable and pivoted gearshift lever shaft, with one or more shift fingers formed on the gearshift lever shaft, with switching wings, which are operatively connected with respectively a synchronization and coupling device for lot wheels supported on at least one wheel set shaft of the gearing unit, and with cams formed respectively on the switching wings, with which the shift finger can mesh in the execution of a process of gear ratio modification, and over these (the cams) can axially displace the switching wings, characterized in that each switching wing (13, 39, 40, 41, 42, 43, 44) is assigned to at least one specific shift finger (3, 4, 5, 6, 7, 8, 9), in that the cam (36, 47, 50) of each switching wing features an essentially U-shaped cross section profile with a short shank (11) and a long shank (12), by which the length of the short shank (11) is selected such that, on the one hand, in a non-deviated position (N), the assigned shift finger can be displaced laterally away over the short shank (11), to docking on the long shank (12), and to deflection of the switching wing, and on the other hand, can be constructed for the return movement of the switching wing to the non-deviated position (N) against the short shank (11).

2. Switching mechanism according to claim 1, characterized in that the cams (36, 47, 50) are not concentrically connected with a connecting segment (10) of the respective switching wings (13, 39, 40, 41, 42, 43, 44).

3. Switching mechanism according to claim 2, characterized in that the switching wings (13, 39, 40, 41, 42, 43, 44) are respectively pivoted in a swingable pivot (14, 35) and feature a meshing element (15, 51) on the end that guides from the cam (36, 47, 50).

4. Switching mechanism according to claim 3, *characterized* in that the meshing element (15, 51) is operatively connected with the assigned synchronization and coupling device of the change-over gear.

5. Switching mechanism according to at least one of the previous claims, characterized in that a pivoted shift lever (31, 45, 46) features a cam (33), with

which a shift finger of the gearshift lever shaft (2) can mesh, and that the shift lever (31, 45, 46) possesses on its opposite end a meshing element (34), which protrudes into the zone of contact of a cam (36, 50) of a switching wing (13, 39, 40, 41, 42, 43, 44).

6. Switching mechanism according to at least one of the previous claims, characterized in that the shift fingers (3, 4, 5, 6, 7, 8, 9) are arranged on the gearshift lever shaft (2) in axially variable positions and with variable lengths.

7. Switching mechanism according to at least one of the previous claims, characterized in that the cams (36, 47, 50) of the switching wings (13, 39, 40, 41, 42, 43, 44) feature variable lateral distances from the gearshift lever shaft (2).

8. Switching mechanism according to at least one of the previous claims, characterized in that the cams (33, 36, 47, 50) of the switching wings (13, 39, 40, 41, 42, 43, 44) and/or the shift lever (31, 45, 46) regarding their short and long shanks (11, 12) are positioned in such a way in the switching mechanism (1), that in shifting into a gear (G1), the assigned shift finger (3) strokes over the short shank (11) of the cam (50) collision free in the direction of the long shank (12), while the shift finger (4) of the other gear (G2) located in the same switching lane, moving away from the long shank (49) of the cam (47) assigned to this gear (G2), strokes collision free over the short shank (48).

9. Switching mechanism according to at least one of the previous claims, characterized in that it is arranged on a five-speed or six-speed change-over gear, whose axial wheel set arrangement, starting from a low gear element, is as follows: Reverse gear (RG) and second gear (G2), fourth gear (G4) and sixth gear (G6), third gear (G3) and first gear (G1), fifth gear (G5) and, in the case of a seven-gear gearing unit, seventh gear (G7).

10. Switching mechanism according to claim 9, *characterized* in that the gearing unit is a back-gearing unit with one or two counter shafts and at least one gearing unit primary shaft.

11. Switching mechanism according to claim 9, characterized in that the gearing unit is a double coupling unit or a manual or, as the case may be, an

automatically shiftable change-over gear with only one low gear and switch coupling.

12. Switching mechanism according to at least one of the previous claims, characterized in that it can be operated by an external switching mechanism with an H-gear shifting gate (16).